Taiwan was used in this study. There are three screening tools: 1) Pap smear alone; 2) HPV DNA testing followed by Pap smear triage; and 3) self-sampling for HPV testing followed by Pap smear triage. Self-sampling for HPV testing strategy is annual, and another strategies of screening intervals are annually, every 3 years, and every 5 years. The model parameters are collected from the published references and the health-related governments in Taiwan. Outcome measures included life expectancy, quality-adjusted life years (QALYs), lifetime costs, and incremental cost-effectiveness ratios (ICERs). Probabilistic sensitivity analyses (PSAs) were conducted to assess parameter uncertainty. **RESULTS:** When three times GDP per capita is used as the decision threshold, and all seven screening strategies were cost-effective compared with the no-screening strategy. Compared with the primary screening strategy (an annual Pap smear), self-sampling HPV testing followed by Pap smear triage, HPV DNA testing followed by Pap smear triage every 5 years and every 3 years were cost-effective. **CONCLUSIONS:** Self-sampling for HPV testing followed by Pap smear triage is one of the cost-effective screening strategies in Taiwan.

PCN23

COST-EFFECTIVENESS ANALYSIS OF GEFITINIB FOR LUNG CANCER: A POPULATION BASED STUDY

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OBJECTIVES: Gefitinib is an effective targeted therapy for a subset of non-small cell lung cancer (NSCLC) patients, although its cost-effectiveness remains controversial.. This study used national health insurance claims data to evaluate the cost-effectiveness of gefinitib in patients with NSCLC in Taiwan. **METHODS:** Using claims data and enrollment record from the 2002-2009 National Health Insurance Research Database (NHIRD) in Taiwan, we identified lung cancer patients via the ICD-9-CM codes. We then used ICD-9-CM and billing codes to identify patients who had received chemotherapy containing plantinum-based regimens followed by taxane-based regimens between November 1, 2004 and October 31, 2007. We defined the index date as the date of 1st claim for taxane-based chemotherapy and limited the observational period for cost and survival to 2 years after index date. We further classified these patients into two groups: those who had subsequently received gefitinib vs those had not. We determined survival status by using a previously developed algorithm using the enrollment file of the NHIRD and converted direct medical costs to 2011 US dollars. We then calculated the net benefit for each patient by applying various willingness-to-pay (WTP) values and employed the net benefit regression approach to assess the cost-effectiveness of gefitinib. **RESULTS:** We identified 2555 lung cancer; 979 (38%) had received gefitinib during our study period. The average cost (standard deviation) were 64150(29482) USD for the gefitinib users and 35925(27360) for non-users. The average survival was 487 days (228) for the gefitinib users and 291 days (248) for non-users. Net benefit regression suggested that gefitinib is cost-effective at WTP 53,000 USD/life-year or higher. **CONCLUSIONS:** Among lung cancer patients who started with platinum-based chemotherapy, followed by taxane-based regimen, adding gefitinib to chemotherapy is likely to be cost-effective.

PCN24

HEALTH RELATED QUALITY OF LIFE, DIRECT AND INDIRECT COST ANALYSIS OF STAGE III COLORECTAL CANCER PATIENTS RECEIVING DIFFERENT ADJUVANT CHEMOTHERAPY TREATMENTS IN TAIWAN: A COST UTILITY ANALYSIS

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OBJECTIVES: To evaluate the cost-utility of stage III colorectal cancer patients receiving either capecitabine-based or 5-FU/LV-based adjuvant treatments from the societal perspective. **METHODS:** The data used in this research is being reported in another study (Health Related Quality of Life, Direct and Indirect Cost Analysis of Stage III Colorectal Cancer Patients Receiving Different Adjuvant Chemotherapy Treatments in Taiwan). Direct and indirect costs, including productivity loss of patients and their accompanying persons caused by receiving outpatient or inpatient services, were involved in this study. Propensity score matching was used to reduce selection bias and avoid endogenous problems between two groups of patients. The perspective adopted in this analysis was that of a society in Taiwan. All costs were expressed in 2011 New Taiwan dollars (1 USD is about 30 NTD). Utility value for the health states were derived by mapping the 16 dimensions of EORTC QLQ-C30 onto the EQ-5D based on the published literature (McKenzie and van der Pol, 2009). **RESULTS:** After propensity score matching, a total of 219 patients were included in the analyses. There are 109 in the capecitabine-based treatment and 110 in the 5-FU/LV-based treatment. Over the study period of 6 months, the average cost of capecitabine-based treatment per patient was NT$220,576.3 while yielding 0.47 quality-adjusted life years (QALY). On the other hand, the average cost of 5-FU/LV-based treatment was NT$566,832.1 with 0.42 QALY. Between these two adjuvant treatments, the capecitabine-based treatment was dominant. **CONCLUSIONS:** As opposed to existing studies, cost and HRQoL data were directly obtained from patients. Thus, based on patient-level information and the from the societal perspective, our study showed that capecitabine-based treatment not only saved costs but also improved quality-adjust life year compared with 5-FU/LV-based treatment in the adjuvant treatment of stage III colorectal cancer in Taiwan.

CANCER - Patient-Reported Outcomes & Patient Preference Studies

PCN25

UTILITY OF ADVANCED NON-SMALL CELL LUNG CANCER PATIENTS IN THAILAND: PRELIMINARY STUDY

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OBJECTIVES: Lung cancer is the common cause of cancer death in developing countries. In Thailand, lung cancer, including non-small cell lung cancer (NSCLC) ranks third of 10 leading sites of cancers. NSCLC has a poor prognosis which has an effect on quality of life of both individual patients and their family. Understanding the quality of life and health utility for lung cancer is important; however, little data are available in Thailand. This study aimed to measure baseline health utility among advance NSCLC patients before treated with first-line chemotherapy. **METHODS:** A prospective cohort study was implemented in Maharaj Nakorn Chiang Mai hospital which is a medical teaching hospital located in the north of Thailand. A variety of first-line chemotherapy regimens were available for treatment. In this study, we included patients aged 18 or above, diagnosed with NSCLC with stage IIIB and IV, had performance status (ECOG) 0-1, and were scheduled to receive first-line chemotherapy. The data were collected from January to March 2012. Utility was measured using EuroQoL Thai version. The data were collected while patients visited outpatient oncology clinic. Descriptive statistics were used for data analyses. **RESULTS:** During three months period, 24 patients were included. Eight patients were NSCLC stage IIIB while 16 were stage IV. Mean utility value of overall NSCLC, NSCLC stage IIIB and NSCLC stage IV at baseline before receiving first-line chemotherapy were 0.419, 0.473 and 0.392, respectively. **CONCLUSIONS:** Utility values of patients with advanced NSCLC are likely to be downward due to the severity of disease; therefore, choosing the appropriate first-line chemotherapy regimen might need to consider the quality of life of patients.

PCN26

HEALTH STATE UTILITIES FOR RELAPSED/REFRACTORY (REL/REF) HODGKIN'S LYMPHOMA (HL) AND SYSTEMIC ANAPLASTIC LARGE-CELL LYMPHOMA (SALCL): ASIAN PACIFIC COUNTRY DATA

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OBJECTIVES: Benefits of treatment are often expressed as quality-adjusted life years (QALYs). A QALY attempts to capture benefit in terms of both quantity of survival and quality of life (QoL). Where appropriate data has not been captured in a trial context, other methods need to be applied. The aim of this study was to capture QoL data in the form of health state utilities, ranging from 0 (dead) to 1 (full health), for outcomes associated with receiving therapy for rel/ref HL and sALCL. These utilities could be used to support economic evaluation of future treatments. **METHODS:** Health state descriptions or 'vignettes' were developed (with patient and clinician input) depicting the burden associated with various stages of rel/ref HL or sALCL, degree of disease response (complete [CR] or partial response, stable or progressive disease), and adverse events (AE) experienced (B-symptoms, acute/chronic graft-versus-host disease [GVHD], grade I/II or grade III peripheral sensory neuropathy). Vignettes were then valued by 75 members of the general public in Taiwan, Thailand, and South Korea using the time trade-off (TTO) methodology to elicit utility values. **RESULTS:** Disease experience was associated with a significant decline in QoL. Even a CR demonstrated a notable negative impact on QoL (Taiwan 0.597, Thailand 0.728, South Korea 0.827). The experience of any AE was associated with substantial disutility, the most burdensome generally being acute GVHD (Taiwan 0.199, Thailand 0.124, South Korea 0.347). Additionally, progressive disease was valued as having a very severe impact on QoL (Taiwan 0.229, Thailand 0.071, South Korea 0.317). **CONCLUSIONS:** Experience of rel/ref HL and sALCL is viewed as potentially devastating by individuals in all three countries. However, variations do exist between regions, suggesting that individuals may approach the TTO exercise differently. The results of this study may have important implications for the economic evaluation of future treatments.

PCN27

DISCLOSING COMPLEMENTARY AND ALTERNATIVE MEDICINES (CAM) USE TO THE HEALTH CARE PROVIDERS:A DESCRIPTIVE STUDY

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OBJECTIVES: To investigate the cancer patients' CAM disclosure to the health care provider. **METHODS:** The study was designed as a questionnaire based, cross sectional analysis. A prevalence based sample of 393 cancer patients admitted to the oncology ward at Penang General Hospital was hereby selected for the study. **RESULTS:** Of 393 patients, 184 (46.1%) were identified as CAM users and among them 126 (68.5%) were actively reported to use one or more types of CAM at the time of interview. CAM disclosure rate was 43%, while only in 33.7% cases, patients been asked by their doctors on the CAM use. The most common reason of CAM non-disclosure was 'not important for doctors to know about CAM' 63 (34.2%). Among other reasons were, 'doctors never asked about CAM' 15(8.2%), 'doctors have little knowledge about CAM' 9(5.9%), 'fear of CAM disapproval by the doctors' 8(4.3%) and fear of termination of therapy by the doctors' 6(3.3%). Among the demographic variables patients having a history of regular health checkups before cancer diagnosis were tend to discuss their CAM use with the doctors ($r=0.16$, $p=0.02$). Perceived severity of side effects due to conventional therapies was positively correlated ($r=0.18$, $p=0.014$) with CAM disclosure. Patients who received

recommendations on CAM from friends and family members were tend not to disclose their CAM use (r= -0.17, p=0.02). However those received recommendations from their health care providers were more likely to disclose CAM use (r=0.3, p<0.001). Previous experiences of side effects due to CAM therapies was positively correlated (r=0.14, p=0.04) with CAM disclosure behavior. **CONCLUSIONS:** Understanding the underlying beliefs of patients' reluctance to disclose CAM usage to health care providers is important especially when they are on active cancer treatment. A friendly non-judgmental discussion about CAM use by the physicians may improve patients' CAM behavior towards CAM disclosure.

PCN28

A FEASIBILITY STUDY ON APPLYING PREFERENCE-BASED QUALITY-OF-LIFE MEASURES IN CHRONIC MYELOID LEUKEMIA OUTPATIENTS TREATED WITH IMATINAB IN TAIWAN

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OBJECTIVES: Since the launch of imatinib in Taiwan, survival of chronic myeloid leukemia (CML) has significantly improved with the cost of numerously increasing drug expenditure. Neither health-related quality-of-life (QoL) of CML patients nor long-term cost-effectiveness of imatinib, however, has been investigated in Taiwan. This study aimed to explore the feasibility of preference-based utility measures on CML patients with imatinib treatment. **METHODS:** This cross-sectional survey was conducted at a medical center in southern Taiwan from June 2011 to January 2012 after approved by the Institutional Review Board. CML outpatients receiving imatinib were invited to participate the interviews; their QoL were measured by EuroQol group 5-dimension (EQ-5D) questionnaire, 100-mm visual analogue scale (EQ-5D VAS) and time-trade-off (TTO) method, and then transformed into utility value. Japanese preference weight was used to transform EQ-5D index into utility. Patients' demography, socioeconomic characteristics and progression history were collected to adjust utility values by multiple regression. **RESULTS:** Of the 42 (mean age: 50.0±16.0 years, male: 54.8%) participants, 36 (85.7%) have been regularly followed up over 1.5 years, and 13 (31.0%) had history of progressing to accelerated or blast phase. In EQ-5D survey, most participants choose "no problem" in the domains of mobility, self-care, and usual activities, and 10 (23.8%) and 7 (16.7%) participants choose "some problem" in pain/discomfort and anxiety/depression, respectively. Mean utility values and response rates for EQ-5D, EQ-5D VAS, and TTO were 0.80±0.09 (100%), 0.78±0.13 (97.6%), and 0.80±0.18 (92.9%) and there was no significant difference in utility between three measures. No association between participant' characteristics and utility was found, except for utility derived from EQ-5D VAS was significantly associated with education level. **CONCLUSIONS:** Preference-based utility measured are applicable to CML patients receiving routine treatments. Since no Taiwanese preference weight for transferring EQ-5D assessment, further large-scale studies are needed, however, to validate and cross-validate the measurements.

PCN29

HRQOL DURING ADJUVANT CHEMOTHERAPY WITH CAPECITABINE IN PATIENTS AFTER SURGERY FOR COLON CANCER: ADDITIONAL STUDY OF JFMC37-0801

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OBJECTIVES: The JFMC37-0801 trial is a phase III trial designed to validate superiority of 1-year treatment with capecitabine to 6 months treatment as adjuvant chemotherapy for stage III colon cancer. Health related quality of life (HRQOL) and cost-effectiveness have been evaluated as an additional study. We analyzed impact of prolonged treatment with capecitabine on patients' HRQOL. **METHODS:** Capecitabine (2500mg/m^2/day) was orally given on days 1-14, followed by a 7-day rest. Enrolled patients were randomly assigned to group A (received 8 courses of capecitabine) or group B (16 courses). In patients agreed to participate to the additional study, HRQOL was evaluated by self-administered questionnaire at the start of the protocol treatment, 3, 6, 9, 12, 15 and 18 months. The questionnaire includes Functional Assessment of Cancer therapy-C (FACT-C) and EuroQol 5 Dimension (EQ-5D). **RESULTS:** In 1306 patients enrolled to the JFMC37-0801 trial, HRQOL of 171 participants (81 in group A, 90 in group B) were evaluated. Mean age of the patients in group A and B was 63.3 and 64.5 years-old, respectively. Among a total of 1197 points of survey, 959 questionnaires (80.1%) were retrieved. Recovery rates of questionnaires tended to decrease with time after finishing treatment. Through the entire survey period, mean score of FACT-C (96.9-103) and EQ-5D (0.85-0.93) were satisfactory. In longitudinal analysis of the change from baseline score, the scores tended to increase after finishing the treatment period in both group A and group B. Significant difference between the score of group A and group B was not observed in each survey point. No difference by age and tumor stage was also observed. **CONCLUSIONS:** HRQOL of the patients received postoperative adjuvant chemotherapy with capecitabine was satisfactory through the survey period. There was no significant difference of HRQOL between 8 and 16 courses of capecitabine treatment.

PCN30

USE OF MIND BODY COMPLEMENTARY THERAPIES (MBCTS) AMONG MALAYSIAN ONCOLOGY PATIENTS

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OBJECTIVES: Prayers, spiritual healing, yoga, meditation, tai Chi, Qi gong, support groups are classified as Mind Body Complementary Therapies (MBCTs). While the benefits of MBCTs in cancer care is continued to be investigated, the prevalence of such practices is not well known among Malaysian cancer patients. The study aims to examine the prevalence of MBCTs use and its potential effects on Health related quality of life (HRQoL) in a group of cancer patients. **METHODS:** This cross-sectional study was undertaken with 393 cancer patients at the oncology wards of Penang General Hospital, Malaysia. **RESULTS:** Out of 393 participants, 184 (46.1%) were reported to use some type of Complementary and Alternative Medicines (CAM). Among the CAM users, 75(40.7%) patients self reported using MBCTs for their cancers. The majority of the MBCTs users were female (60/75, p=0.01), aged between 38 and 57 (44/75), and were from Malay ethnicity (46/75). Socio-demographic factors including age (r=0.15, p=0.03) and monthly house hold income (r= -0.25, p<0.001) were strongly correlated with MBCTs use. Prayers for health reasons was the highest 51 (27.7%), followed by spiritual practices 20(10.8%), meditation 7(5.9%), tai chi 7(3.8%), music therapy 4(2.1%), Qigong 1(0.5%), hypnotherapy 1(0.5%), and reiki 1(0.5%). Recommendations from friends and family members 53(70%) were the most common reasons of MBCTs use followed by patient's own will 22(29.3%). Health related Quality of Life (HRQoL) scores shows significant difference in functional and symptoms scores among MBCTs users and non-users. **CONCLUSIONS:** Nearly half of the CAM users utilized some types of MBCTs. Prayers specifically for health reasons and spiritual practices are somewhat common among cancer patients. Viewing MBCTs not as alternative but to complement cancer therapies to address emotional and psychological needs may help in improving health related quality of life (HRQoL) of cancer patients.

PCN31

A CROSS-SECTIONAL ASSESSMENT OF THE QUALITY OF LIFE OF CANCER PATIENTS AND THEIR COMPLEMENTARY AND ALTERNATIVE MEDICINES (CAM) USE

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OBJECTIVES: To examine the prevalence of CAM use among Malaysian cancer patients and compare the differences in health-related quality of life (HRQoL) between CAM users and non-users. **METHODS:** This cross-sectional study was undertaken with 393 patients at the oncology wards of Penang General Hospital, Malaysia. The HRQoL between CAM users and non-users was assessed by using European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30). **RESULTS:** The majority (46.1%) of the participants were frequent CAM users. The most common CAM therapies were dietary and nutritional supplements (41.3%), herbal products (30.4%), prayers for health reasons including spirituality (22.8%), traditional Malay therapies (20.11%) and Traditional Chinese Medicines (14.1%). No significant difference was found between functional and symptoms scores among CAM users and non-users. However; global health scores/quality of life was significantly different (P=0.002) between CAM users and non-users. **CONCLUSIONS:** Patients' interest in the use of CAM highlights the need of greater health care education in this field. This study provides evidence of CAM use and its overall effects on quality of life scores in a sample of patients with cancer. Patients should be aware of the potential benefits of CAM therapies for cancer. Health care professionals can play their role effectively to encourage patients towards rational use of CAM therapies.

PCN32

QUALITY OF LIFE OF CANCER PATIENTS RECEIVING CAPECITABINE MONOTHERAPY AT NAKHON PATHOM HOSPITAL NAKHON PATHOM HOSPITAL

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OBJECTIVES: To assess quality of Life (QoL) among cancer patients receiving capecitabine at Nakhon Pathom Hospital in Thailand. **METHODS:** Cancer patients receiving capecitabine, either as monotherapy or in combination with other anticancer drugs, at Nakhon Pathom Hospital, were recruited during July to September 2011. The Thai version of the Functional Assessment of Cancer Therapy-General (FACT-G) comprising four subscales, physical well-being (PWB), social/family well-being (SWB), emotional well-being (EWB) and functional well-being (FWB), was utilized to assess QoL of these patients. Demographic data (age, gender,status, educational level, occupation, and monthly income) as well as medical history (type, stage and duration of cancer) of the patients were also collected. **RESULTS:** Altogether 13 patients receiving capecitabine monotherapy and 24 patients receiving capecitabine combination therapy were recruited in this study. Their mean (SD) overall QoL score was 51.66 (9.33) from 108 . While the mean (SD) scores for PWB, SWB, EWB and FWB subscales were 8.60 (5.86), 19.91 (5.75) from 28, 7.38 (4.96) from 24 and 15.77 (7.88) from 28, respectively. The mean QoL in this group of patients were lower than normaltive data. Only subscal SBW that higher than normative data. The score of BEW<PWB<FWB<SWB. No significant relationship was revealed between demographic data and any subscales of the FACT-G in patients receiving capecitabine monotherapy, **CONCLUSIONS:** The QoL in patients who receive capecitabine monotherapy are lower than normative data. Even though , no relationships are found between demographic data and any subscales. The activities to improve patients' emotion should be establish to improve quality of life of the patients.